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DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS

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[Issued June 15, 1925]

UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR ASBESTOS METALLIC CLOTH SHEET PACKING

FEDERAL SPECIFICATIONS BOARD SPECIFICATION No. 94a

[Revised June 15, 1925]

This specification was officially promulgated by the Federal Specifications Board on December 29, 1923, for the use of the Departments and Independent Establishments of the Government in the purchase of asbestos metallic cloth sheet packing

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I. GRADE

Packing shall be furnished in one grade only.

II. MATERIAL AND WORKMANSHIP

Asbestos metallic cloth sheet packing shall be made of woven asbestos wire insertion cloth treated with a high grade heat-resisting rubber compound. The workmanship shall be first class in every respect.

III. GENERAL REQUIREMENTS

General requirements shall be as stated in Section IV.

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IV. DETAIL REQUIREMENTS

1. The cloth shall be woven from yarn, containing not less than 90 per cent, by weight, long fiber asbestos of not less than 12 per cent, by weight, water of composition.

2. The weave of the cloth shall consist of not less than 20 strands in the warp and 10 strands in the filler per linear inch.

3. For cloth $\frac{1}{32}$ inch in thickness, each strand of the warp and filler shall consist of one ply of asbestos yarn which is intertwisted or spun about a brass or copper wire.

4. For cloth $\frac{1}{16}$ inch in thickness, each strand of the warp and filler shall consist of two plies of asbestos yarn, which are intertwisted or spun about a brass or copper wire.

5. The brass or copper wire shall be 0.008 inch in diameter, plus or minus 0.001 inch.

6. The weight per square yard of the asbestos metallic cloth before application of the heat-resisting rubber compound shall be not less than that stated below:

Thickness (inch)	Weight per square yard (pounds)
$\frac{1}{32}$	2. 75
$\frac{1}{16}$	3. 25

7. The heat-resisting rubber compound shall be not more than 50 per cent, by weight of the finished packing.

8. Sheet packing $\frac{1}{32}$ and $\frac{1}{16}$ inch in thickness shall be one ply of cloth. Sheet packing $\frac{1}{8}$, $\frac{3}{16}$, and $\frac{1}{4}$ inch in thickness shall be made of two, three, and four plies, respectively, of $\frac{1}{16}$-inch cloth cemented together.

9. A plus tolerance of $\frac{1}{64}$ inch will be permitted. No minus tolerance in thickness shall be allowed.

10. The finished packing shall not crack nor show any signs of injury when bent flat on itself in any direction.

11. Packing shall show no signs of softening, cracking, material hardening, or disintegration of the rubber compound when bolted between iron plates and subjected to the action of saturated steam at 275 lbs./in.^{2} for a total of 24 hours.

12. The finished packing shall conform to the weights shown in the following table:

Thickness (inch)	Weight per square yard	
	Minimum	Maximum
	Pounds	*Pounds*
$\frac{1}{32}$	5. 0	5. 50
$\frac{1}{16}$	6. 0	6. 60
$\frac{1}{8}$	11. 5	12. 65
$\frac{3}{16}$	17. 5	19. 25
$\frac{1}{4}$	23. 0	25. 30

V. METHODS OF INSPECTION AND TESTS

A sample of finished packing 12 inches square, of untreated fabric 12 inches square, and 3 ounces of asbestos yarn shall be selected by the inspector from each lot of 2,000 pounds of packing or less, and forwarded to the testing laboratory.

VI. PACKING AND MARKING

1. Packing shall be supplied in rolls weighing 100 pounds or 250 pounds unless otherwise ordered. Each roll shall be wrapped in waterproof paper.

2. The packing shall be marked with the maker's name and brand neatly stenciled upon each linear yard. The date of manufacture shall be marked on each end of each roll.

VII. ADDITIONAL INFORMATION

Packing described in this specification is suitable for a steam pressure of 300 lbs./in.^{2} and a temperature of 700° F.

VIII. GENERAL SPECIFICATIONS

All tests and analyses shall be made in accordance with the methods described in United States Government General Specifications for Rubber Goods, F. S. B. Specification No. 59a, in effect on date of proposal.

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